

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A radiation detection apparatus comprising a radiation detector and a lens arrangement, the lens arrangement comprising a polarising element and an optical corrector, the polarising element being arranged to selectively transmit radiation of a first polarisation and to selectively reflect radiation of a second polarisation, and the optical corrector having a first and a second surface, where at least one of the first and second surfaces is shaped to correct aberrations present in the lens arrangement.
2. (Original) A radiation detection apparatus as claimed in claim 1 wherein the optical corrector is arranged to support the polarising element upon a surface thereof.
3. (Currently Amended) A radiation detection apparatus as claimed in claim 1 or ~~claim 2~~ wherein the optical corrector is physically located between the polarising element and the radiation detector,
4. (Original) A radiation detection apparatus as claimed in claim 3 wherein a rearmost surface of the optical corrector is aspherical or spherical.

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5. (Currently Amended) A radiation detection apparatus as claimed in ~~any of~~
~~claims~~claim 1 to 4 wherein the optical corrector is fabricated from a material having a
density of around 30 g l^{-1} .

6. (Currently Amended) A radiation detection apparatus as claimed in ~~any of~~
~~claims~~claim 1 to 5 wherein the optical corrector is fabricated from a material having a
refractive index of between 1.001 and 2.

7. (Currently Amended) A radiation detection apparatus as claimed in ~~any of~~
~~claims~~claim 1 to 6 wherein there is provided a further optical corrector interposed
between the optical corrector and the radiation detector.

8. (Original) A radiation detection apparatus as claimed in claim 7 wherein the
further optical corrector has a front surface with an elliptical cross-section and an
aspherical, plane or spherical profile.

9. (Currently Amended) A radiation detection apparatus as claimed in claim 7 ~~or~~
~~claim 8~~ wherein the further optical corrector has a rear surface with a different profile to
the profile of the front surface.

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10. (Currently Amended) A radiation detection apparatus as claimed in ~~any of~~
~~claims~~claim 7 to 9 wherein the further optical corrector is fabricated from a plastic
material.

11. (Currently Amended) A radiation detection apparatus as claimed in ~~any of~~
~~claims~~claim 7 to 10 wherein the further optical corrector is fabricated from a plastics
foam material.

12. (Currently Amended) A radiation detection apparatus as claimed in ~~any~~
~~preceding-claim~~1 wherein the radiation detector is an imaging radiation detector.

13. (Currently Amended) A radiation detection apparatus as claimed in ~~any of the~~
~~above claims~~claim 1 wherein the polarising element is arranged to focus radiation
having the second polarisation.

14. (Currently Amended) A radiation detection apparatus as claimed in ~~any~~
~~preceding-claim~~1 wherein the radiation detection apparatus is arranged to detect
millimetre wavelength radiation.